

REMARKS

Claims 1-6, 12, 15, 16, 43, 47-48, 59-61, 140-146 and 174-176 are pending in this application. Claims 140-146 and 174-176 have been withdrawn by the examiner. Independent claims 1, 43, and 59 are amended to clarify that the heating of the hybrid material is carried out after irradiation, as discussed herein. Therefore, no new matter is introduced. The Office Action is discussed below:

Withdrawal of the Objection:

Applicants thank the examiner for the withdrawal of the objection to claim 3 in view of the response filed on August 8, 2009.

Obviousness Rejection:

On pages 2-8 of the Office Action, the examiner has maintained the obviousness rejections of the claims as described below:

On pages 2-5 of the Office Action, the examiner rejects Claims 1-4, 6, 12, 15, 16, and 59-61 under 35 U.S.C. 103(a) allegedly as being unpatentable over Merrill *et al.* (PN 5,879,400) in view of Ashby *et al.* (PN 5,989,472).

On pages 5-6 of the Office Action, the examiner rejects Claims 43 and 48 under 35 U.S.C. 103(a) allegedly as being unpatentable over Merrill *et al.* in view of Ashby *et al.* and Johnson (PN 4,971,761).

On page 6 of the Office Action, the examiner rejects Claim 5 under 35 U.S.C. 103(a) allegedly as being unpatentable over Merrill *et al.* in view of Ashby *et al.* as applied to claim 1 above, and further in view of Kagiya *et al.* (PN 3,894,928).

On page 7 of the Office Action, the examiner also rejects Claim 5 under 35 U.S.C. 103(a) allegedly as being unpatentable over Merrill *et al.* in view of Ashby *et al.* as applied to claim 1 above, and further in view of Patel (PN 4,164,458).

On pages 7-8 of the Office Action, the examiner rejects Claim 47 under 35 U.S.C. 103(a) allegedly as being unpatentable over Merrill *et al.* in view of Ashby *et al.* and Johnson as applied to claim 43 above, and further in view of Patel.

On pages 8-9 of the Office Action the examiner provides response to the arguments, filed on August 8, 2009.

With regards to the applicants arguments that the references fail to teach heating of the hybrid material after irradiation in order to improve oxidative stability, the examiner contends that the argument is not persuasive as this language is not present in the claims as written. Applicants respectfully disagree with the examiner and point out that the independent claims 1, 43, and 59 step c) clearly recites heating of the hybrid material after the crosslinking step b). In order to expedite the prosecution and for additional clarity, applicants amend the independent claims 1, 43, and 59 step c) to recite "heating the hybrid material above the melting point of the radiation crosslinked polyethylene, thereby reducing free radicals in the crosslinked polyethylene."

Accordingly, the cited references or any combination thereof do not make the claimed invention obvious for the reasons clarified in the responses filed on August 8, 2009 and February 13, 2009.

Especially, the applicants submit that a combination of the cited references does not teach or suggest all claim limitations of the independent claims 1, 43 or 59. Thus, all independent claims and the claims depending therefrom are nonobvious over the cited references, as mandated in the MPEP that:

"All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

See MPEP §2143.03 at 2100-142 (Rev. 6, September 2007).

Not only must all of the elements recited in the claim be present, the elements must be "arranged or combined in the same way" as recited in the claim in order for anticipation to be found.

Net Money/IN Inc. v. VeriSign Inc., 545 F.3d 1359, 1369-71, 88 USPQ2d 1751, 1758-59 (Fed. Cir. 2008).

Applicants submit that the conditions like heating of the hybrid material after irradiation in order to improve oxidative stability, that is, as recited in the independent claims "heating the hybrid material above the melting point of the radiation crosslinked polyethylene" and the method steps as recited in the instant claims are different from the cited Merrill *et al.* (PN 5,879,400). Accordingly, Merrill *et al.* (PN 5,879,400) in combination with any of the cited references does not make the claimed invention obvious.

According to the examiner (see Office Action page 2, 4a.), Merrill discloses irradiation of polyethylene using electron irradiation while at a temperature above the melting temperature (refers to Merrill col. 2, lines 30-50). Therefore, as clarified previously and above, a combination of Merrill and Ashby processes would not provide a method that requires:

i) irradiation of a polyethylene of a compression molded hybrid material in order to provide a strong interface between polyethylene and the piece; and

ii) heating of the hybrid material after irradiation in order to improve oxidative stability by reducing free radicals in the crosslinked polyethylene. That is, "heating the hybrid material above the melting point of the radiation crosslinked polyethylene".

Since the results of irradiation of a medical implant having interfaces (such as a hybrid material) would not have been predictable to one of ordinary skill in the art, mere combination of irradiating polymeric material while at a temperature above the melt and adding a metal piece to the irradiated polymeric material would not make the claimed method obvious.

Moreover, even if the cited references (Merrill, Ashby, Johnson, Kagiya, and/or Patel) are combined, as discussed above and in the previous responses, would not provide methods that require: i) irradiation of a polyethylene of a compression molded hybrid material in order to provide a strong interface between

the polyethylene and the piece; and ii) heating of the hybrid material after irradiation (i.e., heating the radiation crosslinked polyethylene) in order to improve oxidative stability by reducing free radicals in the crosslinked polyethylene. Thus, a combination of the cited references would not provide the method steps "arranged or combined in the same way" as recited in the claim; such as "heating the hybrid material above the melting point of the radiation crosslinked polyethylene".

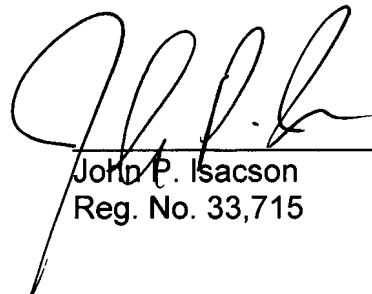
Also, even if the cited references are combined, would not yield the claimed methods or a medical implant made by the claimed methods.

Therefore, in view of the above clarifications and amendments to the claims, applicants request withdrawal of the obviousness rejection.

REQUEST

Applicants submit that claims 1-6, 12, 15, 16, 43, 47-48, 59-61, 140-146 and 174-176 are in condition for allowance, and respectfully request favorable consideration to that effect. The Examiner is invited to contact the undersigned at (202) 628-6600 should there be any questions.

Respectfully submitted,



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Date

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